

**About the taxonomic status
of the *Aeschrocnemis* Weise, 1888 and the group
of *A. serbica* (Kutschera, 1860)
(Coleoptera: Chrysomelidae: Alticinae)**

Blagoy GRUEV

The morphological characteristics and type of general distribution of the taxa of *Derocrepis* and *Aeschrocnemis* leave no doubt that we are dealing with two distinct genera and not with two subgenera of the genus *Derocrepis* Weise, 1888. The beginning of the development of *Derocrepis* and *Aeschrocnemis* is lost somewhere around the end of the Mesozoic era (late Cretaceous) (HEIKERTINGER, 1925) or, more probably, during the Tertiary.

The genus *Derocrepis* has a holarctic distribution, which HEIKERTINGER (1925) explains with the disjunction of its once unbroken areal of habitat into two parts - Palaearctic (Eurasia) and Neoarctic (North America). According to him the cause was the breaking-up of land and the formation of the Atlantic Ocean. Another hypothesis can be put forward: it is possible that the holarctic distribution of the genus *Derocrepis* was due to the migration of its representatives from one continent to the other over the Bering land of the Tertiary and the following severance of the habitat due to the disappearance of that "land bridge" (GRUEV, 1990). No conclusive answer to this question can be provided for the time being. There is no doubt, however, that *Derocrepis*, as well as the rest of the extant insect genera, have come into being not later than the Tertiary. Now the genus is represented by the species *rufipes* (Linnaeus) (in almost all of Europe and in Asia: Azerbaijan, West and Mid-Siberia, the Sayan Mountains), *sodalis* (Kutschera) (in Europe: the Alps, the Apennines), *erythropus* (Melsh) (in North America) and *aesculi* (Dury) (in North America).

Aeschrocnemis was described by WEISE (1888) as a distinct genus, close to *Derocrepis*. HEIKERTINGER (1925), though, qualifies it as a subgenus of *Derocrepis* despite the morphological differences which demonstrate a clear severance between them. It is evident that *Aeschrocnemis* has the development of a distinct genus but shows a close relation to *Derocrepis*. HEIKERTINGER (1925) assumes that both *Derocrepis* and *Aeschrocnemis* have originated from a common hypothetical ancestor, which he even names "*Protoderocrepis*". The same author's explanation for the differentiation and

geographical isolation of *Aeschrocnemis* within the territories from the Balkans to the Crimea, the Caucasus and Asia Minor, owing mainly to the geological development of the area during the Tertiary (orogenesis in various geological phases, changes in the configuration of relief and sea basins, climate changes), also sounds plausible. One could also add that it is possible during the Pleistocene for an additional scattering of *Aeschrocnemis* to have occurred into "new" for its regional habitat mountains; first a migration from the mountainous parts towards the lowlands, caused by colder climate, then, probably during the interglacial periods, these basically mountain insects migrated back from lowlands to higher ground. Having done that, they remained isolated from one another in various mountain parts, which, as a rule, is a prerequisite for the emergence of new forms.

The genus *Aeschrocnemis* includes the species *serbica* (Kutschera) (the Balkans, Romania, the Crimea, the Caucasus, Asiatic Turkey), *graeca* (Allard) (Greece), *pubipennis* (Reitter) (Georgia, Transcaucasia), *delagrangi* (Pic) (Syria), and *whiteheadi* (Warchalowski) (Asiatic Turkey).

Aeschrocnemis serbica is considered as a polytypic species (HEIKERTINGER, 1925) with 12 subspecies. But studying the morphology and distribution of "*serbica* s.l." it is impossible not to point out clear differences in the structure of the male genitalia of the separate taxa. These differences, along with the secondary winglessness (characteristic for the whole genus *Aeschrocnemis* and probably acquired during existence in mountain conditions) and the geographical isolation of the taxa in separate mountain parts and regions, determine a reproductive isolation among them on a species level. All this provides grounds for considering the "*serbica*" complex as a group of self-sufficient, closely related species, rather than as subspecies of *serbica*. Incidentally, the status of one of them - *anatolica* (Heikertinger, 1922) has already been altered from subspecific to specific (DOGUET & BERGEAL, 2000).

A catalogue of the species of the *Aeschrocnemis serbica* - group

Genus *Aeschrocnemis* Weise, 1888 stat. resurr.

Aeschrocnemis Weise, In: Erichson, Naturgesch. Ins. Deutschl., Col. VI: 855.

Derocrepis subg. *Aeschrocnemis*: Heikertinger, 1922, Münch. Kol. Zeitschr., vol. 4 (1922, p. 296, im Selbstverlag).

Derocrepis subg. *Derocrepisomus* Pic, 1911, L'Echange, 27: 109.

***Aeschrocnemis anatolica* (Heikertinger, 1922)**

Derocrepis serbica var. *anatolica*, Münch. Kol. Zeitschr., 1915, vol. 4 (1922, p. 332; im Selbstverlag).

Derocrepis serbica anatolica: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 171-172.

Derocrepis anatolica: Doguet et Bergeal, 2000, Nouv. Revue Ent. (N. S.), 17, 2: 131.

Distribution: Asiatic Turkey.

***Aeschrocnemis caucasica* (Weise, 1886) comb. n., stat. n.**

Derocrepis serbica var. *caucasica* Weise, In: Erichson, Naturgesch. Ins. Deutschl., Col. VI: 690.

Derocrepis serbica caucasica: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 161-162.

Distribution: Caucasian and Pericaucasian countries (South Russia, Circassia, Georgia, Swanetia, Daghestan).

***Aeschrocnemis hellenica* (Doguet et Bergeal, 2000) comb. n., stat. n.**

Derocrepis serbica hellenica Doguet et Bergeal, Nouv. Revue Ent. (N. S.), 17, 2: 131.

Distribution: Greece (North and Central).

***Aeschrocnemis jailensis* (Heikertinger, 1922) comb. n., stat. n.**

Derocrepis serbica var. *jailensis* Heikertinger, Münch. Kol. Zeitung, 1915, vol. 4 (1922, p. 328, im Selbstverlag).

Derocrepis serbica jailensis: Heikertinger, Wien. Ent. Zeitung, 1925, 42, 4-10: 165-166.

Distribution: Ukraine (Crimea).

***Aeschrocnemis laterufa* (Pic, 1909) comb. n., stat. n.**

Derocrepis serbica race *laterufa* Pic, L'Echange, 25: 178.

Derocrepis serbica race *laterufa* var. *obscuricolor* Pic, 1911, L'Echange, 27: 109.

Derocrepis serbica laterufa: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 166-167.

Distribution: Georgia (Vladikavkaz and Mt. Kazbek).

***Aeschrocnemis merditensis* (Heikertinger, 1922) comb. n., stat. n.**

Derocrepis serbica var. *merditensis* Heikertinger, Münch. Kol. Zeitschr., 1915, vol. 4 (1922, p. 327, im Selbstverlag).

Derocrepis serbica merditensis: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 164-165.

Derocrepis serbica ab. *bicolor*: Apfelbeck, 1914, Glasnik Zem. Muz. Bosn.-Herzeg., 26: 437.

Distribution: Albania (North: Mt. Merdita = Mt. Merdite and Mt. Pashtrik).

***Aeschrocnemis ossetica* (Heikertinger, 1922) comb. n., stat. n.**

Derocrepis serbica var. *ossetica* Heikertinger, Münch. Kol. Zeitschr., 1915, vol. 4 (1922, p. 329, im Selbstverlag).

Derocrepis serbica ossetica: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 167-168.

Distribution: Caucasus: Ossetia.

***Aeschrocnemis peloponnesiaca* (Heikertinger, 1910) comb. n., stat. n.**

Derocrepis serbica var. *peloponnesiaca* Heikertinger, Verh. zool.-bot. Ges., Wien, 60: 52.

Derocrepis serbica peloponnesiaca: Heikertinger, 1925, Wien. Ent. Zeitung, 42, 4-10: 170-171.

Distribution: Greece (Central: Mt. Parnassos; Peloponnese: Velia Vuna).

***Aeschrocnemis rhilensis* (Gruev, 1974) comb. n., stat. n.**

Derocrepis serbica rhilensis Gruev, Ent. Arb. Mus. Frey, 25: 124-126.

Distribution: Bulgaria (Mt. Rila).

***Aeschrocnemis rhodopensis* (Gruev, 1973) comb. n., stat. n.**

Derocrepis serbica rhodopensis Gruev, In: Tomov, Gruev, Trav. Sci. Univ. Plovdiv, Bulgaria, Biol., 11: 98.

Derocrepis serbica merditensis: Mohr, 1965, Beitr. Ent., 15: 705.

Distribution: Bulgaria (Rhodopi Mts.); Asiatic Turkey (Artvin Distr.).

***Aeschrocnemis serbica* (Kutschera, 1860)**

Haltica (gr. *Crepidodera*) *serbica* Kutschera, Wien. Ent. Monatschr., 4: 74.

Crepidodera strangulata Allard, 1860, Ann. Soc. Ent. Fr. (3) 8: 61.

Crepidodera serbica: Allard, In: Schneider & Leder, Beitr. kaukas. Kaferfn. - Verh. Nat. Ver. Brunn, 17: 339.

Derocrepis serbica var. *bicolor* Weise, 1886, In: Erichson, Naturgesch. Ins. Deutschl., Col. VI: 690.

Distribution: Bulgaria, Croatia (Dalmatia), Greece (North and Central), Romania (Comana Vlasca), Serbia, Ukraine (Crimea), Asiatic Turkey (Istanbul Distr., Bursa Distr., Tokat Distr.).

***Aeschrocnemis slavicus* (Gruev, 1979) comb. n., stat. n.**

Derocrepis serbica slavicus Gruev, Deutsche Ent. Zeitschr., N. F., 26: 134-135.

Distribution: Bulgaria (West: above Tran), Republic of Macedonia (Mt. Baba), Serbia (Mt. Kraishte and Kosovo: Mt. Shar).

Material examined

Aeschrocnemis anatolica - Turkey (Perge)

A. caucasica - Caucasus

A. jailensis - Ukraine (Crimea: Mt. Yaila)

A. laterufa - Georgia (Caucasus: Sennoe Pole)

A. merditensis - Albania (Mt. Merditë)

A. peloponnesiaca - Greece (Peloponnese; Mt. Taigetos)

A. rhilensis - Bulgaria (Mt. Rila)

A. rhodopensis - Bulgaria (Rhodopi Mts.)

A. serbica - Bulgaria (Stara planina Ridge, Mt. Sredna Gora, Mt. Strandzha, Mt. Sakar), Ukraine (Crimea)

A. slavicus - Bulgaria (above Trán), Republic of Macedonia (Mt. Baba), Serbia (Mt. Kraishte)

References

- DOGUET S., M. BERGEAL. 2000. Contribution a la connaissance des Altises de Grece et de Turquie (Coleoptera, Chrysomelidae, Alticinae). - *Nouv. Revue Ent. (N. S.)*, 17 (2): 123-135.
- GRUEV B. 1990. Mountain leaf beetles of Eumolpinae, Chrysomelinae and Alticinae (Coleoptera, Chrysomelidae) in Bulgaria. *Fauna and zoogeography. - Trav. Sci. Univ. Plovdiv, Biol.*, 28 (8): 27-61. (In Bulgarian).
- HEIKERTINGER F. 1925. Morphologie der Halticinen-gattung *Derocrepis* Weise (Coleoptera, Chrysomelidae). - *Wiener Entomologische Zeitung*, 42 (4-10): 95-178.
- WEISE J. 1881-1893 (1888). Chrysomelidae. - In: Erichson, *Naturgeschichte Insecten Deutschlands, Coleoptera VI, Halticinae*, 666-1057.

Received on 20.09.2001

Author's address:

Prof. B. Gruev

P. O. Box 289

4000 Plovdiv, Bulgaria

За таксономичния статус на *Aeschrocnemis* Weise, 1888 и групата на *A. serbica* (Kutschera, 1860) (Coleoptera: Chrysomelidae: Alticinae)

Благой ГРУЕВ

(Резюме)

Въз основа на изследвания на морфологията и географското разпространение на *Aeschrocnemis* Weise, 1888 е възстановен неговият родов статус, а подвидовият ранг на 10 таксона от групата на *serbica* (Kutschera, 1860) е издигнат във видовете. Изказани са мнения върху хипотези за връзката между родовете *Derocrepis* и *Aeschrocnemis* и развитието на ареалите им. Съставен е каталог на видовете от род *Aeschrocnemis* с предложените нови комбинации и промени на таксономичния ранг.